**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

# APPLICATION FOR PERMIT TO DRILL

| | |
|---|---|
| 5. MINERAL LEASE NO: ML-49422 | 6. SURFACE: State |
| 1A. TYPE OF WORK: DRILL ☑ REENTER ☐ DEEPEN ☐ | 7. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A |
| B. TYPE OF WELL: OIL ☑ GAS ☐ OTHER ____ SINGLE ZONE ☐ MULTIPLE ZONE ☑ | 8. UNIT or CA AGREEMENT NAME: N/A |
| 2. NAME OF OPERATOR: Wolverine Operating Company of Utah, LLC | 9. WELL NAME and NUMBER: Wolv State Cedar Ridge 7-1 |
| 3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616 PHONE NUMBER: (616) 458-1150 | 10. FIELD AND POOL, OR WILDCAT: Undesignated |
| 4. LOCATION OF WELL (FOOTAGES) Surf 426988X 4335346Y 39.166150 -111.845126<br>AT SURFACE: 716' FSL, 2338' FWL, SE/4 SW/4 BHL 426889X 4335325Y 39.165952<br>AT PROPOSED PRODUCING ZONE: 648' FSL, 2011' FWL, SE/4 SW/4 (@ Navajo) -111.846271 | 11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESW 7 19S 1E S |
| 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 1.66 miles northwest of Gunnison, Utah | 12. COUNTY: Sanpete / 13. STATE: UTAH |
| 15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET): 631' | 16. NUMBER OF ACRES IN LEASE: 2473.85 / 17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40 |
| 18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): None | 19. PROPOSED DEPTH: 11,400 / 20. BOND DESCRIPTION: Blanket Surety B001849 |
| 21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5,168' GL | 22. APPROXIMATE DATE WORK WILL START: 2/1/2006 / 23. ESTIMATED DURATION: 50 to 75 days |

24. **PROPOSED CASING AND CEMENTING PROGRAM**

| SIZE OF HOLE | CASING SIZE, GRADE, AND WEIGHT PER FOOT | | | SETTING DEPTH | CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT |
|---|---|---|---|---|---|
| 30" | 20" | X42 .25 | .25 wall | 120 | see Drilling Plan |
| 17-1/2" | 13-3/8" | J-55 BT | 68# | 3,000 | see Drilling Plan |
| 12-1/4" | 7" | N-80 LT | 26# | 8,000 | see Drilling Plan |
| 8-1/2" | 7" | HCP110 | 26# | 11,400 | see Drilling Plan |
| | | | | | |
| | CONFIDENTIAL | | | | |
| | | | | | |

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☐ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
- ☑ COMPLETE DRILLING PLAN
- ☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Edward Higuera TITLE Manager-Development

SIGNATURE Edward Higuera DATE 12/23/2005

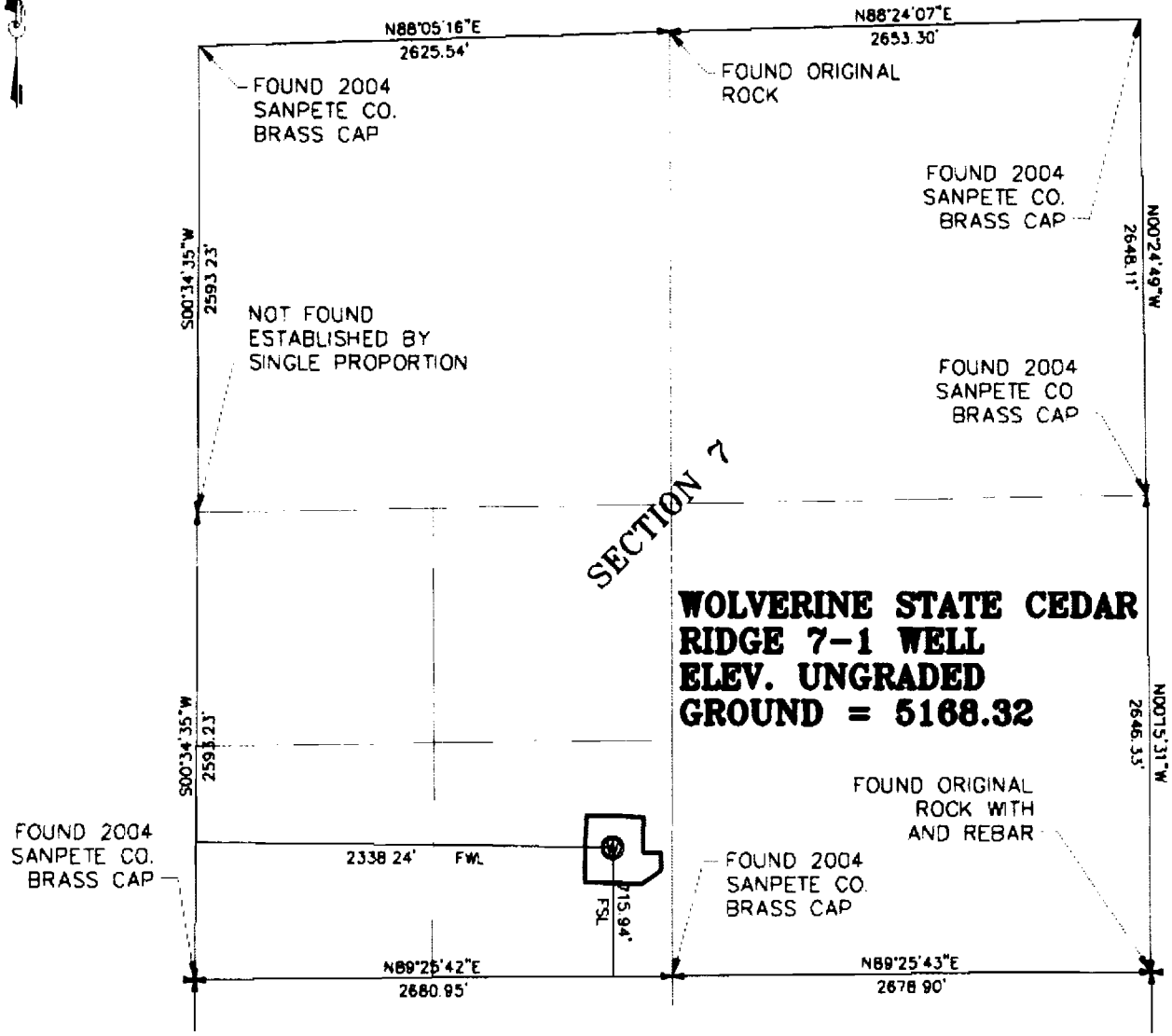
(This space for State use only)

API NUMBER ASSIGNED: 43-039-30031

APPROVAL: DEC 27 2005

(11/2001) (See Instructions on Reverse Side)

# SECTION 7, T.19 S., R.1 E., S.L.B. &M.




PROJECT

**WOLVERINE GAS & OIL COMPANY OF UTAH, LLC**

WELL LOCATION, LOCATED AS SHOWN IN THE SE 1/4 OF THE SW 1/4 OF SECTION 7, T.19 S., R.1 E., S.L.B. & M. SANPETE COUNTY, UTAH

## LEGEND

- ✚ SECTION CORNER AS NOTED
- ✚ QUARTER CORNER AS NOTED
- Ⓦ PROPOSED WELL LOCATION

NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT THE WOLVERINE STATE CEDAR RIDGE 7-1 WELL LOCATED IN THE SE 1/4 OF THE SW 1/4 OF SECTION 7, T.19 S., R.1 E., S.L.B. & M., SANPETE COUNTY, UTAH.

## BASIS OF ELEVATION

ELEVATION BASED ON USGS BENCH MARK # B47EAM LOCATED IN THE SOUTHWEST 1/4 OF SECTION 8, T.19 S., R.1 E., S.L.B. & M., BENCH MARK WAS SET IN 1964. ELEVATION USED 5253.00.

## CERTIFICATE

THIS IS TO CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME UNDER MY SUPERVISION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Ryan W. Savage 11/6/05

RYAN W. SAVAGE 183345 REGISTERED

RYAN SAVAGE

STATE OF UTAH

## BASIS OF BEARING

BASIS OF BEARING USED WAS N89°25'42"E BETWEEN THE SOUTHWEST AND THE SOUTH QUARTER CORNER OF SECTION 7, T.19 S., R.1 E., S.L.B. & M.

LATITUDE: 39°09'58.26576"N = (39.16618493)
LONGITUDE: 111°50'45.25043"W = (111.84590280)


**Savage Surveying, LLC**
Ryan W. Savage, PLS
PO Box 892
278 S 600 W
Richfield, UT 84701
Home: 435-896-8635
Fax: 435-896-8635
Cell: 435-201-1345


**Well Location Layout for**

**Wolverine Gas & Oil Company of Utah, LLC**

| | DRAWING NAME | SCALE | DATE | PROJECT NUMBER | SHEET NUMBER |
|---|---|---|---|---|---|
| | WELL PLAT | 1" = 1000' | 11/03/05 | 0510-006S | 1 |
| DESIGNED BY: RWS | SURVEYED BY: TKS | CHECKED BY: RWS | DRAWN BY: RWS | | |

# WOLVERINE OPERATING COMPANY
**of Utah, LLC**

*Energy Exploration in Partnership with the Environment*

December 23, 2005

Ms. Diana Whitney
State of Utah
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Application for Permit to Drill—Wolverine Operating Company of Utah, LLC
**Wolverine State Cedar Ridge State 7-1**
*Surface Location:* 716' FSL, 2338' FWL, SE/4 SW/4
*Target BH Location:* 631' FSL, 1931' FWL, SE/4 SW/4
Section 7, T19S, R1E, S.L.B. & M, Sanpete County, Utah

Dear Ms. Whitney:

Wolverine Operating Company of Utah, LLC (Wolverine) respectfully submits the enclosed original and one copy of the *Application for Permit to Drill (APD)* for the above referenced state directional well. A request for exception to spacing (R649-3-11) is hereby requested based on topography because the surface location of the well is located within 460' of the drilling unit boundary. Wolverine is the only owner and operator within 460' of the proposed well and all points along the intended well bore path. Included with the APD is the following supplemental information:

- Survey plat and layout of the proposed well site;
- Drilling prognosis with directional survey calculations and BOP diagram;
- Surface use plan.
- Proposed location maps with access corridor;

Please accept this letter as Wolverine's written request for confidential treatment of all information contained in and pertaining to this application.

Thank you very much for your timely consideration of this application. Please feel free to contact myself at 616-458-1150 or Don Hamilton of Buys & Associates, Inc. at 435-719-2018 if you have any questions or need additional information.

Sincerely,

Edward Higuera, Manager-Development

cc: Ed Bonner, SITLA
Don Hamilton, Buys & Associates, Inc.

RECEIVED
DEC 27 2005
DIV. OIL, GAS & M...

*One Riverfront Plaza • 55 Campau, N.W. • Grand Rapids, MI 49503-2616 • 616.458.1150*
*FAX 616.458.0869*

# WOLVERINE OPERATING COMPANY OF UTAH, LLC

## DRILLING PLAN

### Wolverine State Cedar Ridge 7-1
**Township 19 South, Range 1 East, Section 7, SE-SW**
**Sanpete County, Utah**

**Plan Summary:**

It is planned to drill this confidential exploratory well as a slightly deviated bore hole to allow the bottom-hole location to be at a standard location with a surface location optimally situated to minimize disturbance of the land. The well will be drilled to depth of 11,400' MD (11,389' TVD) to test the Navajo formation. Well path deviation caused by subsurface geologic irregularities is expected to be the primary drilling concern in this area. No abnormal pressure is anticipated. The planned surface and bottom-hole locations are as follows:

| | |
|---|---|
| Surface Location: | 716' FSL, 2338' FWL, Section 7, T19S, R1E, S.L.B. & M. |
| Navajo Top BH Location: | 648' FSL, 2011' FWL, Section 7, T19S, R1E, S.L.B. & M. |
| TD BH Location: | 631' FSL, 1931' FWL, Section 7, T19S, R1E, S.L.B. & M. |

Conductor casing will be set at approximately 120 feet and cemented to surface. A 17-1/2" hole will be drilled to 3000' MD (3000' TVD) and 13-3/8" surface casing will be set and cemented to surface. A 12-1/4" hole with slight deviation will be drilled to 8500', where the hole size may be reduced to 8-1/2" before continuing to final depth of 11,400' MD (11,389' TVD). The well will be logged and cased, and 7" casing may be set at TD for a completion attempt. Sufficient cement will be used to fill behind the 7" casing to approximately 9000' MD (8993' TVD).

It is planned to start drilling this well in February, 2006. The planned minor deviation will not cause the well to cross any lease or section lines.

| | |
|---|---|
| **Well Name:** | Wolverine State Cedar Ridge 7-1 |
| **Surface Location:** | 716' FSL, 2338' FWL<br>SE/4 SW/4 Section 7, T19S, R1E, S.L.B. & M.<br>Sanpete County, Utah |
| **TD Bottom-Hole Location:** | 631' FSL, 1931' FWL<br>SE/4 SW/4 Section 7, T19S, R1E, S.L. B. & M. |
| **Navajo Top B-Hole Location:** | 648' FSL, 2011' FWL<br>SE/4 SW/4 Section 7, T19S, R1E, S.L. B. & M. |
| **Elevations:** | 5168' GL, 5185' KB |

## I. Geology:

A. Tops of important geologic markers and anticipated water, oil, gas, and mineral content are as follows:

| Formation | Interval (TVD-KB) | Interval (MD-KB) | Contents |
|---|---|---|---|
| Quaternary (Surface) | 17' – 175' | 17' – 175' | W. |
| Tertiary | 175' – 1255' | 175' – 1255' | W. |
| Cretaceous | 1255' – 1655' | 1255' – 1655' | W. |
| Arapien | 1655' – 9505' | 1655' – 9513' | |
| Twin Creek | 9505' – 9835' | 9513' – 9843' | W., G. & O. |
| Navajo | 9835' – 11111' | 9843' – 11121' | W., G. & O. |
| Chinle | 11111' – 11389' | 11121' – 11400' | W. |
| Total Depth | 11389' | 11400' | |

## II. Casing and Cementing Program:

A. Casing Program (new casing):

| Hole Size | Casing Size | Description | Depth Interval |
|---|---|---|---|
| 30" | 20" | 0.25 wall, X-42, PE | 0 - 120' |
| 17.50" | 13.375" | 68#, J-55, BTC | 0 - 3000' |
| 12.25" | 7.000" | 26#, N-80, LTC | 0 - 8000' |
| 12.25"/8.50" | 7.000" | 26#, HCP-110, LTC | 8000 - 11400' |

Casing with sufficient burst, collapse, and tension rating may be substituted for any of the above depending on availability.

B. Cementing Program

Conductor: Cement will be as selected by the contractor presetting the conductor. The volume of cement will be as required to cement to surface.

Surface: Surface casing cement will consist of a lead of 850 sacks of CBM Lite lead mixed at 10.5 ppg (4.12 $ft^3$/sk) followed by a tail of 600 sacks of Premium Plus mixed at 15.6 ppg (1.19 $ft^3$/sk). Slurry volumes will be as required to cement to surface. All cement will contain a minimum of 2% $CaCl_2$. Casing hardware will include guide shoe, float collar, top plug, and at least three centralizers.

Production: Production casing will be cemented in one stage using 300 sacks 50:50 POZ mixed at 13.5 ppg (1.46 $ft^3$/sk) to fill from approximately 11,400' (TD) to 9000 feet. Hardware will include a float shoe, float collar, top plug, and centralizers as needed. Actual cement volumes are to be based on log caliper hole volume plus 25% excess.

Actual cement slurries for conductor, surface, and production casing will be based on final service company recommendations.

The DOGM shall be notified at least twenty-four hours prior to running and cementing the surface and production casing strings.

## III. Blow Out Prevention Equipment:

A. The casing head will be a 13-5/8" x 13-5/8" 5M. A 5M BOP system consisting of an annular preventer, blind rams on bottom, pipe rams on top, appropriate kill line, choke line and manifold with chokes will be installed. The annular preventer will be tested to 1500 psi. All other BOPE will be tested to 4500 psi, or 70% of the internal yield of the casing. BOPE will be tested after initial installation, whenever any pressure seal subject to test is broken, following any related repairs, and at a maximum interval of 30 days. During the course of drilling, the pipe and blind rams will be functionally operated each trip, but not more than once per day. The annular preventer will be functionally operated once per week. All BOP drills will be recorded in the IADC driller's log.

B. All casing strings will be pressure tested to an equivalent pressure of 3000 psi or 1 psi/ft, whichever is greater, but not to exceed 70% of the internal yield pressure of the pipe or the rated working pressure of the BOP, prior to drilling out cement. All waiting on cement times will be adequate to achieve a minimum of 500-psi compressive strength at the casing shoe prior to drilling out.

C. The accumulator will have sufficient capacity (with pumps inoperative) to close both sets of rams from a full open position, open one hydraulic valve against zero well bore pressure, and retain 200 psi above the minimum recommended pre-charge pressure. The accumulator system will have two independently powered pump systems that start automatically after a 200 psi drop in accumulator pressure, plus an emergency nitrogen back-up system connected to the accumulator manifold.

D. The accumulator with hydraulic BOP controls will be located in the accumulator shed with a hydraulically operated remote station located on the drill floor or in the doghouse.

E. Auxiliary equipment will include the following:

1. Both an upper and a lower kelly cock with appropriate handle.
2. A drill pipe safety valve with subs to fit all drill string connections in use, along with appropriate handle.
3. An inside BOP with subs to fit all drill string connections in use.

4. Hand wheels or other locking devices installed on ram type preventers. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device.
5. At least one remote controlled hydraulic choke.

F. Other:

1. The size, weight, grade, type of thread, number of joints, and footage of all casing run will be recorded in the driller's log.
2. The amount and type of all cement pumped will be recorded in the driller's log.
3. After drilling 20 feet below the surface casing shoe, the exposed formation will be tested to a pressure equivalent to the maximum anticipated mud weight required at the total depth of the well.
4. Slow pump rates will be taken every tour and recorded in the driller's log.

## IV. Mud Program:

The circulating fluid will be designed primarily to maintain pressure control and lift cuttings from the hole. From spud to surface casing depth, salt mud with gel will be used along with sweeps as needed for supplemental hole cleaning. A salt mud system will also be used to drill from surface casing to final total depth. LCM sweeps will be used if necessary to control seepage and clean hole. Mud weight is expected to be 10.0 – 10.6 ppg and fluid loss will be limited to 12 cc per 30 minutes by the top of the Navajo.

Sufficient mud inventory will be maintained on location during drilling operations to handle any adverse conditions that may occur, including LCM for lost circulation and weighting materials. The mud monitoring system will consist of visual pit markers. The hole will be kept full at all times.

## V. Evaluation:

A. Mud Log: A mud logging unit will be in operation from a depth of approximately 3000 feet to TD. Samples will be caught, cleaned, bagged, and marked as required.

B. Drill Stem Tests: No DST's are expected.

C. Coring: No whole coring is planned. Rotary side-wall cores may be taken at select intervals in conjunction with open-hole logging operations.

D. Wireline Logs: DLL-MSFL-SP-GR-Caliper will log from TD to surface casing at 3000 feet (GR to Surface). A SDL-DSN-GR, EMI-BCS-GR, and NMR tools may be run per company geologist recommendation.

## VI. Expected Bottom-Hole Pressure and Abnormal Conditions:

A. Hydrogen Sulfide: No Hydrogen Sulfide ($H_2S$) gas is expected.

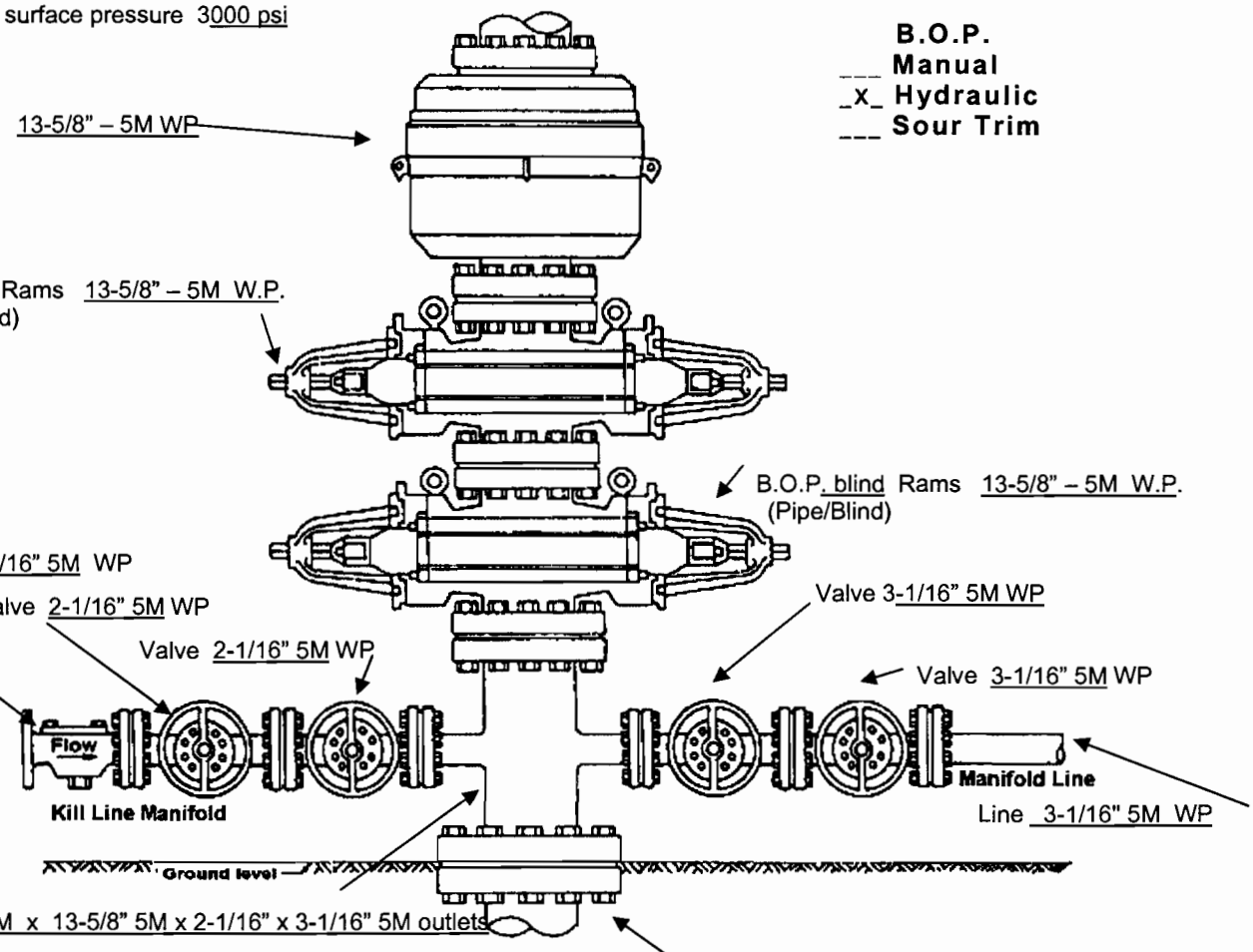
B. Pressure: No significantly over-pressured zones are expected in this well. Bottom-hole pressure in the Navajo is expected to have a pressure gradient of approximately 0.44 psi/ft.

C. Temperature: No abnormally high temperatures are expected.

| PRESSURE CONTROL SYSTEM SCHEMATIC | Operator: |
|---|---|
| Prepared by:<br>EXACT Engineering, Inc<br>Tulsa, OK (918) 599-9400 | **Wolverine Gas & Oil Co. of Utah, LLC** |
| **5M BOP Stack** --- to be utilized while drilling holes for protective and production casings thru lower Arapien, Twin Creek & Navajo intervals | Well name and number<br>Cedar Ridge # 07-1 |

Max. anticipated surface pressure 3000 psi

**B.O.P.**
**___ Manual**
**_x_ Hydraulic**
**___ Sour Trim**



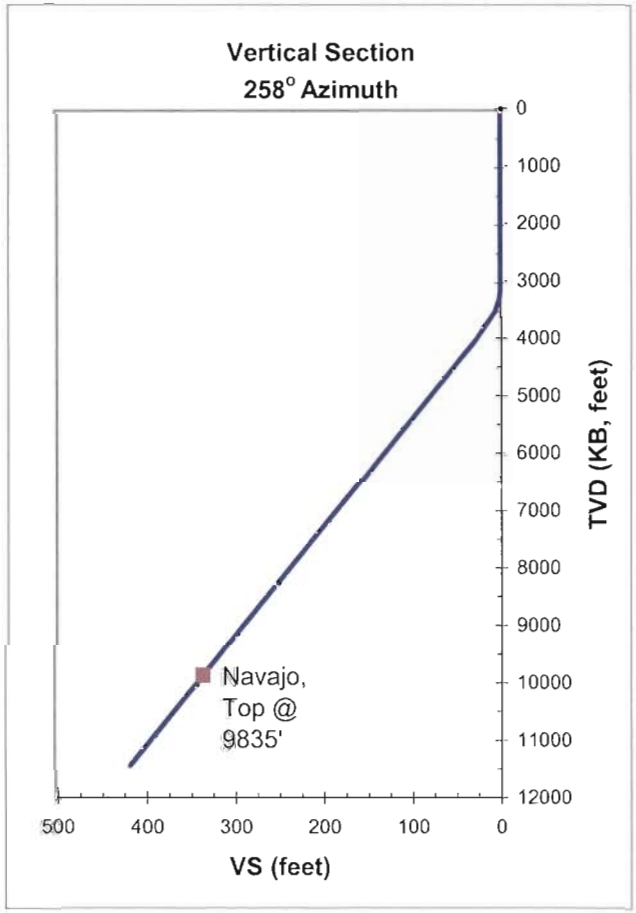
# Wolverine Operating Company of Utah, LLC

## Preliminary Directional Plan

**Wolverine State Cedar Ridge 7-1**
**SE SW Section 7, T19S, R1E**
**Sanpete County, Utah**

**Surface Location:** 716' FSL, 2338' FWL, Section 7, T19S, R1E, S.L.B. & M.
**Navajo Top Location:** 648' FSL, 2011' FWL, Section 7, T19S, R1E, S.L.B. & M.
**Planned BH Location:** 631' FSL, 1931' FWL, Section 7, T19S, R1E, S.L.B. & M.

| Survey Depth (ft) | Incl (°) | Azimuth (°) | Course Lgth (ft) | TVD (ft) | VS (ft) | Coordinates N/S (ft) | | Coordinates E/W (ft) | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | |
| 3000 | 0.00 | 0.00 | 3000 | 3000.00 | 0.00 | 0.00 | N | 0.00 | E |
| 3100 | 0.01 | 258.25 | 100 | 3100.00 | 0.01 | 0.00 | S | 0.01 | W |
| 3200 | 0.47 | 258.25 | 100 | 3200.00 | 0.43 | 0.09 | S | 0.42 | W |
| 3300 | 0.94 | 258.25 | 100 | 3299.99 | 1.66 | 0.34 | S | 1.62 | W |
| 3500 | 1.90 | 258.25 | 200 | 3499.93 | 6.61 | 1.35 | S | 6.48 | W |
| 4000 | 3.00 | 258.25 | 500 | 3999.46 | 27.99 | 5.70 | S | 27.40 | W |
| 4500 | 3.00 | 258.25 | 500 | 4498.78 | 54.16 | 11.03 | S | 53.02 | W |
| 5000 | 3.00 | 258.25 | 500 | 4998.09 | 80.32 | 16.35 | S | 78.64 | W |
| 5500 | 3.00 | 258.25 | 500 | 5497.41 | 106.49 | 21.68 | S | 104.26 | W |
| 6000 | 3.00 | 258.25 | 500 | 5996.72 | 132.66 | 27.01 | S | 129.88 | W |
| 6500 | 3.00 | 258.25 | 500 | 6496.04 | 158.83 | 32.34 | S | 155.50 | W |
| 7000 | 3.00 | 258.25 | 500 | 6995.35 | 185.00 | 37.66 | S | 181.12 | W |
| 7500 | 3.00 | 258.25 | 500 | 7494.67 | 211.16 | 42.99 | S | 206.74 | W |
| 8000 | 3.00 | 258.25 | 500 | 7993.98 | 237.33 | 48.32 | S | 232.36 | W |
| 8500 | 3.00 | 258.25 | 500 | 8493.30 | 263.50 | 53.65 | S | 257.98 | W |
| 9000 | 3.00 | 258.25 | 500 | 8992.61 | 289.67 | 58.97 | S | 283.60 | W |
| 9513 | 3.00 | 258.25 | 513 | 9504.91 | 316.52 | 64.44 | S | 309.89 | W |
| 9843 | 3.00 | 258.25 | 330 | 9834.45 | 333.79 | 67.96 | S | 326.80 | W |
| 11121 | 3.00 | 258.25 | 1278 | 11110.70 | 400.67 | 81.57 | S | 392.28 | W |
| 11400 | 3.00 | 258.25 | 279 | 11389.32 | 415.27 | 84.55 | S | 406.58 | W |




CONFIDENTIAL

# SURFACE USE PLAN

# CONDITIONS OF APPROVAL

*Attachment for Permit to Drill*

| | |
|---|---|
| **Name of Operator:** | Wolverine Operating Company of Utah, LLC |
| **Address:** | One Riverfront Plaza<br>55 Campau NW<br>Grand Rapids, Michigan, 49503-2616 |
| **Well Location:** | **Wolverine State Cedar Ridge 7-1**<br>Township 19 South, Range 1 East, Section 7, SE-SW<br>Sanpete County, Utah |

**Federal and Fee surface use are not required for construction and drilling of the referenced well, State surface use is being requested with this application through the SITLA.**

**The dirt contractor will be provided with an approved copy of the surface use plan of operations before initiating construction.**

1. Existing Roads:

   a. The proposed well site is located approximately 1.66 miles northwest of Gunnison, Utah.

   b. Directions to the proposed well: From intersection of Highways 28 and 89 in Gunnison, proceed northerly on Highway 28 for approximately 1.5 miles, exit left and take access road approximately 0.55 miles west and then south 0.5 miles to well location.

   c. The use of roads under State and County Road Department maintenance are necessary to access the referenced well. However, an encroachment permit is not anticipated since no upgrades to the State or County Road system are proposed at this time.

   d. All existing roads will be maintained and kept in good repair during all phases of operation.

   e. Vehicle operators will obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions.

   f. Improvements are planned for the State portion of the access road from the existing state maintained Highway 28 surface to the proposed wellsite.

   g. An off-lease SITLA Easement is not anticipated for the access road corridor since it is located within the existing lease boundary.

2. Planned Access Roads:

   a. From the existing state maintained Highway 28 paved surface, an access is proposed trending south approximately 6,000' (1.14 miles) to the proposed well site. The access consists of entirely two-track upgrade and crosses no significant drainages. A road alignment plan with

surface ownership has been included within this package for the upgraded road length.

b. The proposed access road will have up to 16' of travel surface. The ROW for the proposed road will accommodate cuts and fills where needed, as such, the total ROW width will vary.

c. Federal or fee surface use approval is not anticipated for the road construction.

d. A maximum grade of 7% will be maintained throughout the project with no major cuts and fills required to access the well.

e. Turnouts are not anticipated since the access road is only 1.14 miles long and adequate site distance exists in all directions.

f. Appropriately sized culverts will be used as needed and practical. Energy dissipating structures will be utilized to minimize erosion resulting from the culverts. Adequate drainage structures will be incorporated into the remainder of the road.

g. No surfacing material will come from Federal lands.

h. No gates or cattle guards are anticipated at this time.

i. Surface disturbance and vehicular travel will be limited to the approved location access road.

j. The operator will be responsible for all maintenance of the access road including drainage structures.

3. Location of Existing Wells:

a. Following is a list of existing wells within a one mile radius of the proposed well:

| | | |
|---|---|---|
| i. | Water wells | None |
| ii. | Injection wells | None |
| iii. | Disposal wells | None |
| iv. | Drilling wells | None |
| v. | Temp. shut-in wells | None |
| vi. | Producing wells | None |
| vii. | Abandoned wells | None |

4. Location of Production Facilities:

a. All permanent structures will be painted a flat, non-reflective, natural tone paint to match the surrounding environment. All facilities will be painted within six months of installation. Facilities requiring compliance with the Occupational Safety and Health Act (OSHA) may be excluded.

b. A tank battery will be constructed on this location; it will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank. All loading lines and valves will be placed inside the berm surrounding the tank battery.

c. Any necessary pits will be properly fenced to prevent any wildlife and livestock entry.

d. All access roads will be maintained as necessary to prevent erosion and accommodate year-round traffic. The road will be maintained in a safe useable condition.

e. The site will require periodic maintenance to ensure that drainages are kept open and free of debris, ice, and snow, and that surfaces are properly treated to reduce erosion, fugitive dust, and impacts to adjacent areas.

f. A pipeline is not being applied for with this application but may be necessary in the future when it will be applied for.

5. Location and Type of Water Supply:

a. The water supply for construction, drilling and operations will be provided by the Gunnison-Fayette Canal through a valid water right purchase and supplemental temporary change form. Additional information regarding the source of water and location will be provided in the future.

b. No water well is proposed with this application.

c. Should additional water sources be pursued they will be properly permitted through the State of Utah – Division of Water Rights.

6. Source of Construction Material:

a. No construction materials will be removed from Federal lands.

b. If any gravel is used, it will be obtained from a state approved gravel pit.

7. Methods of Handling Waste Disposal:

a. All wastes associated with this application will be contained and disposed of utilizing approved facilities.

b. Drill cuttings will be contained and buried on site.

c. The reserve pit will be located inboard of the location and near the northeast edge of the pad.

d. The reserve pit will be constructed so as not to leak, break, or allow any discharge.

e. The reserve pit will be lined with 12 mil minimum thickness plastic nylon reinforced liner material. The liner will overlay a felt liner pad only if rock is encountered during excavation. The pit liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash, scrap pipe, etc., that could puncture the liner will be disposed of in the pit. Pit walls will be sloped no greater than 2:1. A minimum 2-foot freeboard will be maintained in the pit at all times during the drilling and completion operation.

f. The reserve pit has been located in cut material. Three sides of the reserve pit will be fenced before drilling starts. The fourth side will be fenced as soon as drilling is completed, and shall remain until the pit is dry. After the reserve pit has dried, all areas not needed for production will be rehabilitated.

g. No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completion of the well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of the well.

h. Trash will be contained in a trash cage and hauled away to an approved disposal site as necessary but no later than at the completion of drilling operations. The contents of the trash container will be hauled off periodically to the approved Sanpete County Landfill near Gunnison, Utah.

i. Produced fluids from the well other than water will be produced into a test tank until such time as construction of production facilities is completed. Any spills of oil, gas, salt water or other produced fluids will be cleaned up and removed.

j. Any salts and/or chemicals, which are an integral part of the drilling system, will be disposed of in the same manner as the drilling fluid.

k. Sanitary facilities will be on site at all times during operations. Sewage will be placed in a portable chemical toilet and the toilet replaced periodically utilizing a licensed contractor to transport by truck the portable chemical toilet so that its contents can be delivered to the Gunnison Wastewater Treatment Facility in accordance with state and county regulations.

8. Ancillary Facilities:

a. Garbage Containers and Portable Toilets are the only ancillary facilities proposed in this application.

9. Well Site Layout: (See Exhibit B)

a. The well will be properly identified in accordance with state regulations.

b. Access to the well pad will be from the north.

c. The pad and road designs are consistent with SITLA and DOGM specifications.

d. A pre-construction meeting with responsible company representative, contractors and the DOGM will be conducted at the project site prior to commencement of surface-disturbing activities. The pad and road will be construction-staked prior to this meeting.

e. All surface disturbing activities will be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.

f. All cut and fill slopes will be such that stability can be maintained for the life of the activity.

g. Diversion ditches will be constructed as shown around the well site to prevent surface waters form entering the well site area.

h. The site surface will be graded to drain away from the pit to avoid pit spillage during large storm events.

i. The stockpiled topsoil (first 6 inches or maximum available) will be stored in a windrow on the uphill side of the location to prevent any possible contamination. All topsoil will be stockpiled for reclamation in such a way as to prevent soil loss and contamination.

j. Pits will remain fenced until site cleanup.

k. Water injection may be implemented if necessary to minimize the amount of fugitive dust.

10. Plans for Restoration of the Surface:

a. Site reclamation for a producing well will be accomplished for portions of the site not required for the continued operation of the well.

b. The Operator will control noxious weeds along access road use authorizations, well sites, or other applicable facilities by spraying or mechanical removal. A list of noxious weeds may be obtained from the SITLA or the appropriate County Extension Office.

c. Upon well completion, any hydrocarbons in the pit shall be removed in accordance with state regulations. Once the reserve pit is dry, the plastic nylon reinforced liner shall be torn and perforated before backfilling of the reserve pit. The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours.

d. The cut and fill slopes and all other disturbed areas not needed for the production operation will be top soiled and re-vegetated. The stockpiled topsoil will be evenly distributed over the disturbed area.

e. Prior to reseeding the site, all disturbed areas, including the access road, will be scarified and left with a rough surface. The site will then be seeded and/or planted as prescribed by the SITLA.

11. Surface and Mineral Ownership:

a. Surface Ownership -- State of Utah – under the management of the SITLA -State Office, 675 East 500 South, Suite 500, Salt Lake, City, Utah 84102-2818; 801-538-5100.

b. Mineral Ownership – State of Utah – under the management of the SITLA -State Office, 675 East 500 South, Suite 500, Salt Lake, City, Utah 84102-2818; 801-538-5100.

12. Other Information:

a. Mountain States Archaeology, LLC will conduct a Class III archeological survey. A copy of the pending report will be submitted under separate cover to the appropriate agencies by Mountain States Archaeology, LLC.

b. Additional information:

a. No drainage crossings that require additional State or Federal approval are being crossed.

b. No raptor nests are known to exist within one mile of the proposed wellsite.

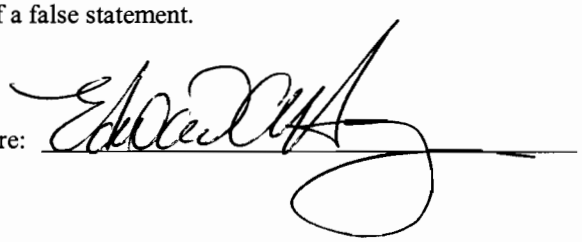
c. A paleontological clearance is not required since suitable formations do not exist within the project area.

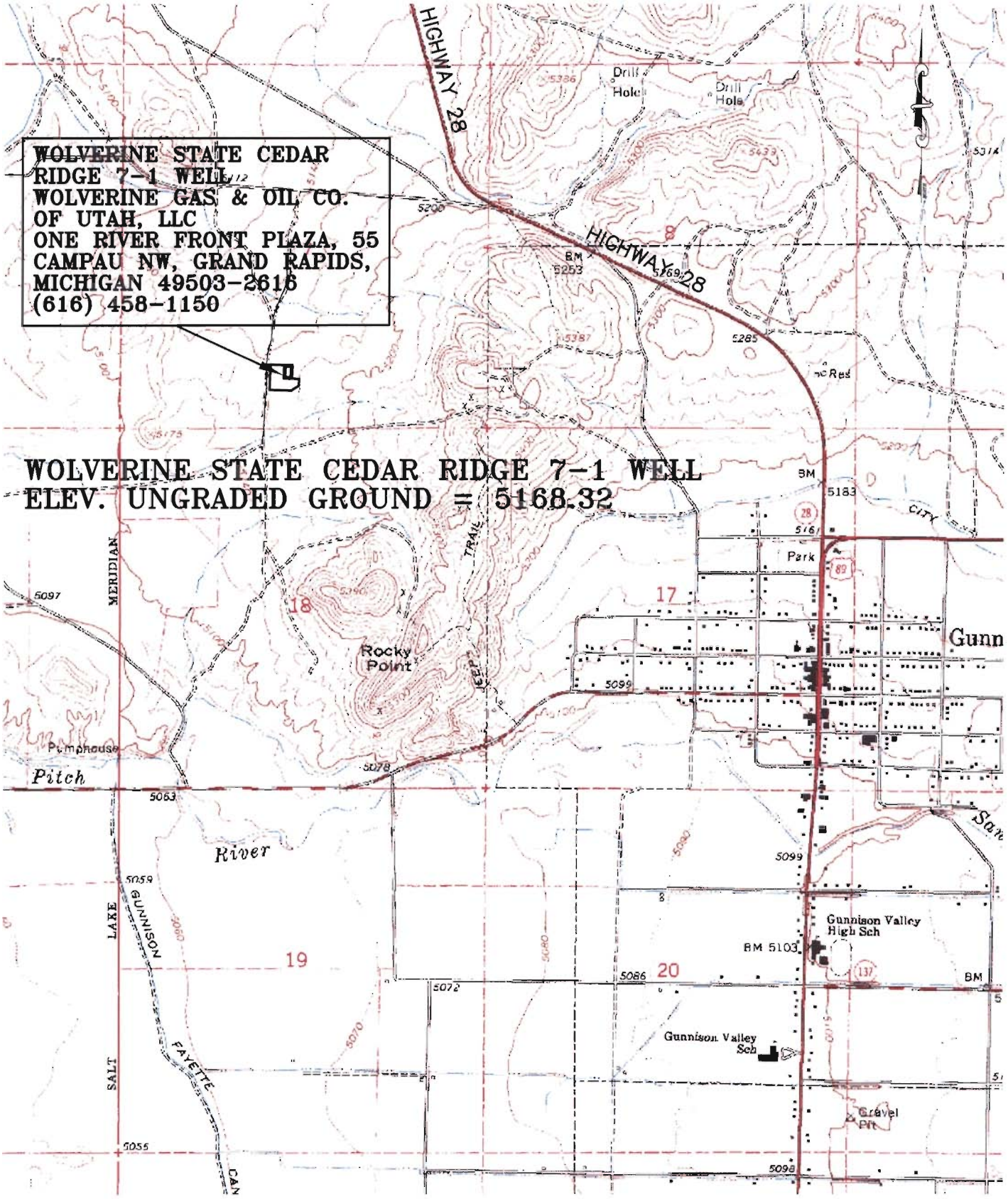
13. Operator's Representative and Certification

| Title | Name | Office Phone |
|---|---|---|
| Company Representative (Richfield) | Charlie Irons | 1-435-896-1943 |
| Company Representative (Grand Rapids) | Ed Higuera | 1-616-458-1150 |
| Agent for Wolverine | Don Hamilton | 1-435-719-2018 |

Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Wolverine Operating Company of Utah, LLC and its contractors and subcontractors in conformity with this APD package and the terms and conditions under which it is approved. I also certify responsibility for the operations conducted on that portion of the leased lands associated with this application, with bond coverage being provided under Wolverine's existing SITLA bond. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Signature:  Date: 12/22/05




WOLVERINE STATE CEDAR RIDGE 7-1 WELL
SECTION 7, T.19 S., R.1 E., S.L.B. & M.


Savage Surveying, LLC
Ryan W. Savage, PLS
PO Box 892
275 S 600 W
Richfield, Ut 84701
Home: 435-896-8635
Fax: 435-896-8635
Cell: 435-201-1345


Well Location Map for

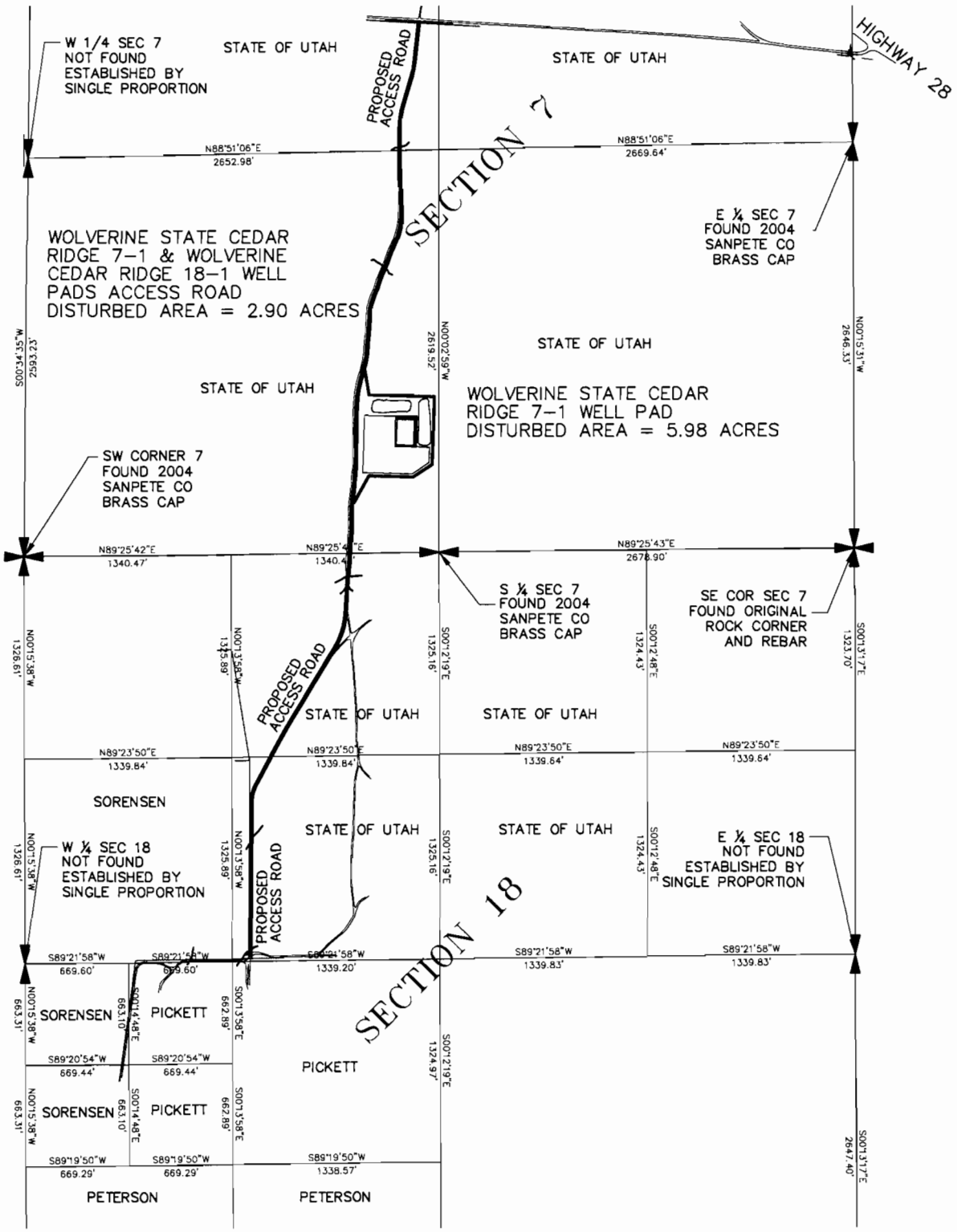
Wolverine Gas & Oil Comapny of Utah, LLC

| DRAWING NAME | SCALE | DATE | PROJECT NUMBER | SHEET NUMBER |
|---|---|---|---|---|
| LOCATION MAP | 1" = 2000' | 11/02/2005 | 0510-006S | 1 |

| DESIGNED BY: | SURVEYED BY: | CHECKED BY: | DRAWN BY: |
|---|---|---|---|
| RWS | TKS | RWS | RWS |

# Wolverine Gas & Oil Company of Utah, LLC

WOLVERINE STATE CEDAR RIDGE 7-1 WELL, STATE LANDS DISTURBED AREA PLAT
SECTIONS 7 & 18, T.19 S., R.1 E., S.L.B. & M.
SANPETE COUNTY, UTAH





Savage Surveying, LLC
Ryan W. Savage, PLS
PO Box 892
275 S 300 W
Richfield, Ut 84701
Home: 435-896-8635
Fax: 435-896-8635
Cell: 435-260-1345


Disturbed Area Plat for

Wolverine Gas & Oil Company of Utah, LLC

| | DRAWING NAME | SCALE | DATE | PROJECT NUMBER | SHEET NUMBER |
|---|---|---|---|---|---|
| | ACREAGE | 1"= 1000' | 11/8/05 | 0510-006S | 1 |
| DESIGNED BY: RWS | SURVEYED BY: TKS | CHECKED BY: RWS | DRAWN BY: RWS | | |

# WOLVERINE GAS & OIL COMPANY OF UTAH, LLC

## WOLVERINE STATE CEDAR RIDGE 7-1
## SECTION 7, T.19 S., R.1 E., S.L.B. &M.

LEGEND

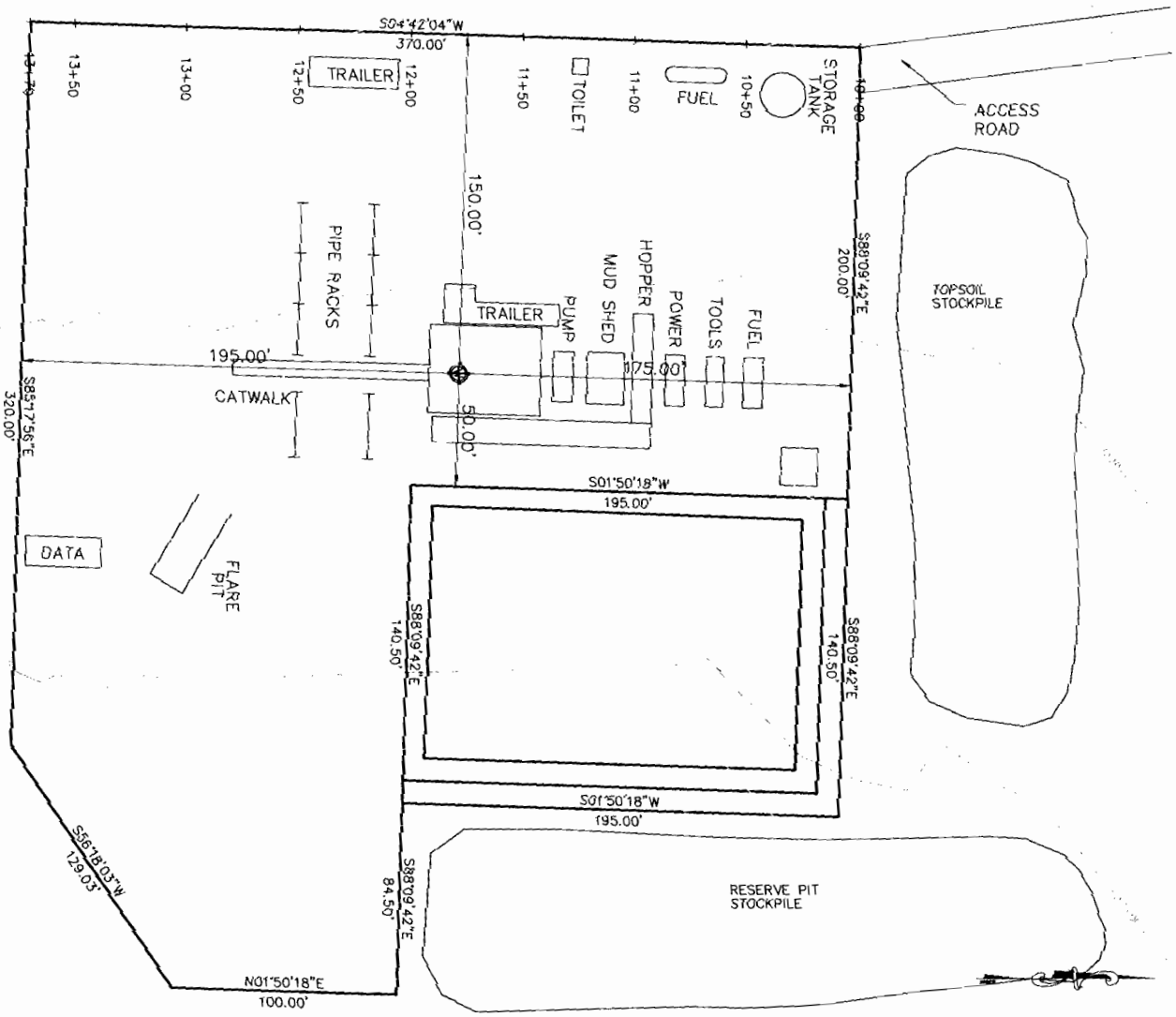
EXISTING ROAD
PROPOSED PAD EDGE
PROPOSED WELL

ELEV. UNGRADED GROUND AT WELL = 5168.32
ELEV. GRADED GROUND AT WELL = 5167.82

APPROXIMATE YARDAGE

(6") TOPSOIL STRIPPING = 2,534 CU. YDS.
REMAINING LOCATION = 11,327 CU. YDS.
TOTAL CUT = 13,861 CU. YDS.
TOTAL FILL = 5,591 CU. YDS.
*FILL IS UNADJUSTED

TOTAL PIT CAPACITY WITH
2' FREEBOARD = 30,047 bbls
TOTAL PIT VOLUME = 7,810 CU. YDS.





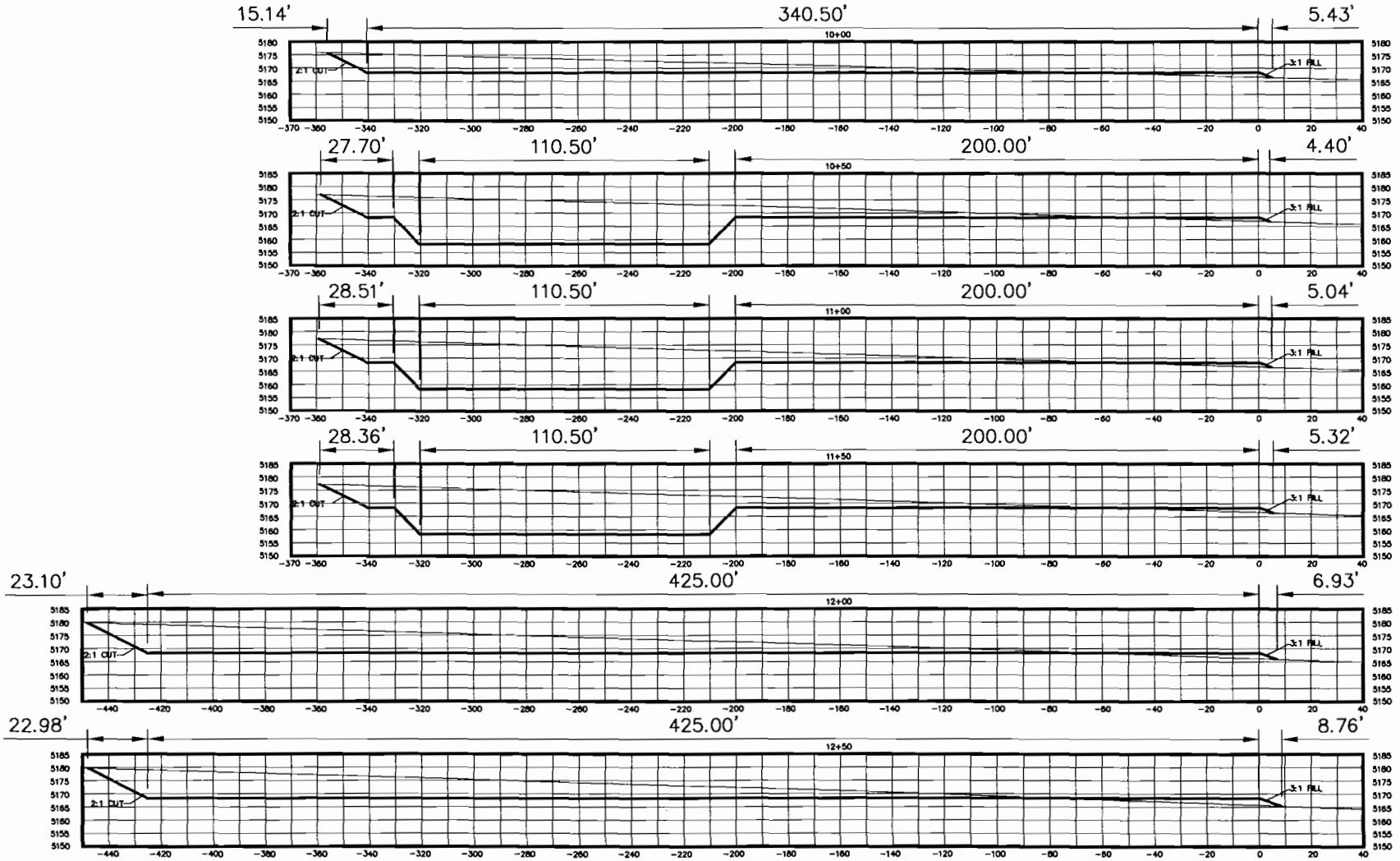
Savage Surveying, LLC
Ryan W. Savage, PLS
PO Box 892
273 S 600 W
Richfield, UT 84701
Home: 435-896-8635
Fax: 435-896-8635
Cell: 435-209-1345


*Well Location Layout for*
*Wolverine Gas & Oil Company of Utah, LLC*

| ENGINEER | SCALE | SHEET NO. |
|---|---|---|
| TM | 1"= 50' | 1 |
| CHECKED R.W.S. | PROJ#: 0510-006S DWG.NM. 0510-006S | |
| DRAWN R.W.S. | DATE 11/02/2005 | |

# WOLVERINE GAS & OIL COMPANY OF UTAH. LLC

## TYPICAL CROSS SECTIONS FOR
## WOLVERINE STATE CEDAR RIDGE 7-1
## SECTION 7, T.19 S., R.1 E., S.L.B. & M.





*Savage Surveying, LLC*
***Ryan W. Savage, PLS***
*PO Box 892*
*275 S 600 W*
*Richfield, Ut 84701*
*Home: 435-896-8635*
*Fax: 435-896-8635*
*Cell: 435-201-1345*

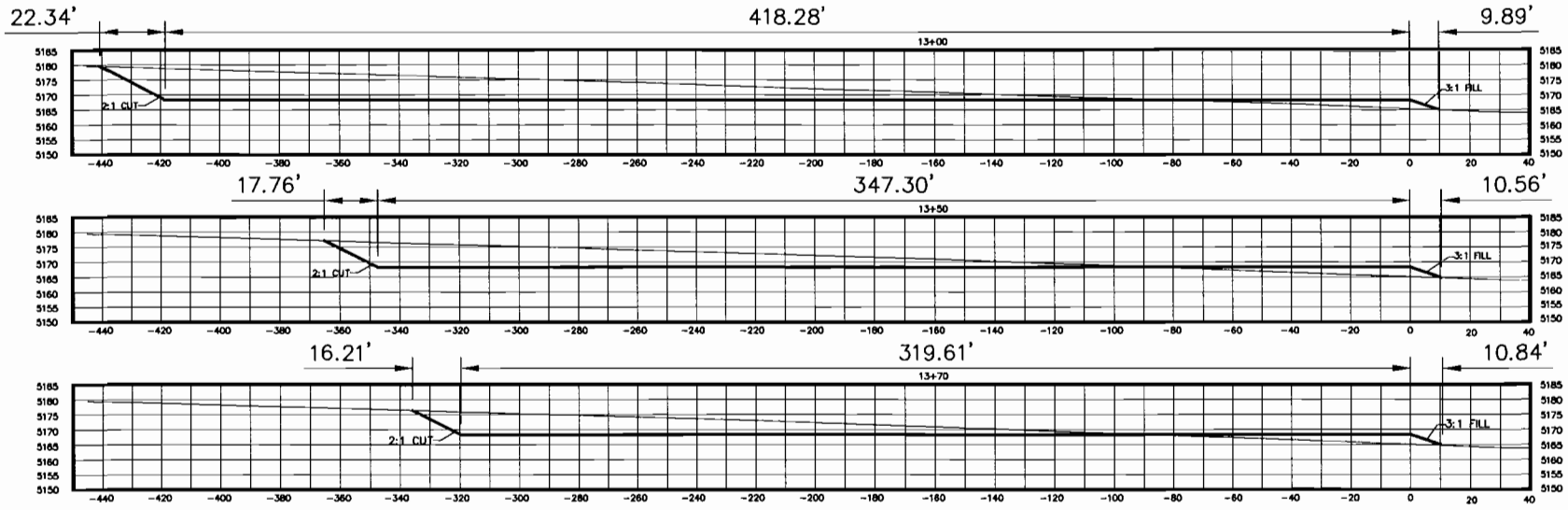

Well Location Layout for

Wolverine Gas & Oil Company of Utah, LLC

| | DRAWING NAME | SCALE | DATE | PROJECT NUMBER | SHEET NUMBER |
|---|---|---|---|---|---|
| | CROSS-SEC | 1"= 60' | 11/6/05 | 0510-006S | 1 |
| DESIGNED BY: RWS | SURVEYED BY: TKS | CHECKED BY: RWS | DRAWN BY: RWS | | |

# WOLVERINE GAS & OIL COMPANY OF UTAH. LLC

TYPICAL CROSS SECTIONS FOR
WOLVERINE STATE CEDAR RIDGE 7-1
SECTION 7, T.19 S., R.1 E., S.L.B. & M.





*Savage Surveying, LLC*
***Ryan W. Savage, PLS***
*PO Box 892*
*275 S 600 W*
*Richfield, Ut 84701*
*Home: 435-896-8635*
*Fax: 435-896-8635*
*Cell: 435-201-1345*


Well Location Layout for

Wolverine Gas & Oil Company of Utah, LLC

| | DRAWING NAME | SCALE | DATE | PROJECT NUMBER | SHEET NUMBER |
|---|---|---|---|---|---|
| | CROSS-SEC | 1"= 60' | 11/6/05 | 0510-006S | 2 |
| DESIGNED BY: | SURVEYED BY: | CHECKED BY: | DRAWN BY: | | |
| RWS | TKS | RWS | RWS | | |